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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,308	04/13/2005	Hiroshi Kajimaru	0020-5368PUS1	6336
2292 7590 12/17/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER MESH, GENNADIY	
			ART UNIT 1796	PAPER NUMBER
			NOTIFICATION DATE 12/17/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/531,308

Applicant(s)

KAJIMARU ET AL.

Examiner

Gennadiy Mesh

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 6-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2 and 6-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 11, 2007 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 1-2 and 6 -10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uno (EP 1 202 122) in view of Kajimaru (US 2002/0061959 - now US Patent 6,818,699).

Regarding Claim 1 Uno discloses aqueous polyester resin dispersion composition comprising, polyester resin particles in the amount of 50 % by mass (see line 53, page 11), having carboxyl groups in the amount corresponding to acid value of 5 - 100 mg KOH/g (see [0017] ,page 3) and average molecular weight from 10,000 to 500,000 (see [0015]), basic compound(see abstract) and water, in the amount more than 10 % by mass. Composition contains polyester particles with particle size in a range from 100 nm to 10 micron(see [0052],page 7). Composition does not contain surfactant.

Uno use anhydride in order to depolymerise polyester and introduce specific amount of carboxyl groups (specific acid value) to the polyester(see [0080],page 9), but silent about use of specific anhydride as a trimellitic anhydride for this purpose.

However, Kajimaru "959" teach that trimellitic anhydride one of the preferable components for the depolymerization of polyester, " from a viewpoint of an easiness for controlling an acid value and a weight average molecular weight".

Therefore, it would have been obvious to one of ordinary skill in the art to use trimellitic anhydride for obtaining polyester with specific properties as acid value and molecular weight per teaching of Kajimaru "959" per method disclosed by Uno.

Regarding limitation of Claim 1:

" wherein when the polyester resin aqueous dispersion is applied on a tin-free steel plate of 0.19 mm in thickness by using a desk-top coater and heated in an oven at 200°C for 3 minutes to yield a resin film of 3 μm in thickness on the steel plate, the resultant resin film exhibits processability of 0T, 1T or 2T, in which the steel plate obtained is bent together with a stack of several steel plates having the same thickness in a pressing machine in such a manner that the resin film become outside the bent plates to examine visually the presence of cracks in the bent area of the resin film, and the minimum plate number n at which the crack is not generated is determined and used as an indicator of processability and designated as nT" -

As substantially same, polyester resin disclosed by Uno in view of Kajimaru will have same properties, including ability to form film with properties claimed by Applicant's at specified conditions of Claim 1.

Regarding Claims 6 and 10 Uno discloses that polyester resin can be prepared by polymerization of polybasic acid [0021], wherein polybasic acid can be tri- or four-functional [0022] and/or aromatic, including for example, isophthalic acid [0026] or trimellitic acid[0034] and variety of glycols, including for example, ethylene glycol [0034].

Regarding Claim 6 see Kajimaru [0021].

Regarding Claims 7 and 8 Kajimaru discloses production process of obtaining aqueous dispersion of polyester resin(see [0060] – [0066]), wherein resin mixed with organic solvent and basic compound in water at preferable temperature less than 40°C with following step of removing organic solvent(see [0067]).

Regarding limitation of Claim 9: amount of basic compound(see[0050]) disclosed by Kajimaru as 0.2 to 2 times more than equivalent amount of the carboxyl group satisfies value of F in formula (1).

Regarding Claim 10 – see Kajimaru [0022], [0023], [0024],[0026] and [0027].

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1-2 and 6 -10 are rejected under 35 U.S.C. 102(b)) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kajimaru(US 2002/0061959 - now US Patent 6,818,699).

Regarding Claims 1 and 2 Kajimaru discloses (see abstract) aqueous polyester resin dispersion composition comprising, polyester resin particles in the amount from 1-60 % by mass (see [0047],page 4), with preferable range of acid value of 8 to 25 mg KOH/g – (note, that reference also discloses that acid value can be less than 8 mg – see [0032],page 3) and average molecular weight more than 9000,preferably 14000 (see [0033]) , basic compound(see abstract) and water, in the amount more than 10 % by mass (see Table 2).

Kajimaru “959” discloses that trimellitic anhydride one of the preferable components for the depolymerization of polyester, “ from a viewpoint of an easiness for controlling an acid value and a weight average molecular weight”.

Composition contains polyester particles with particle size less than 400 nm(see Table 3). Composition does not contain surfactant.

Regarding limitation of Claim 1 as :

“ wherein when the polyester resin aqueous dispersion is applied on a tin-free steel plate of 0.19 mm in thickness by using a desk-top coater and heated in an oven at 200°C for 3 minutes to yield a resin film of 3 pan in thickness on the steel plate, the

resultant resin film exhibits processability of 0T, 1T or 2T, in which the steel plate obtained is bent together with a stack of several steel plates having the same thickness in a pressing machine in such a manner that the resin film become outside the bent plates to examine visually the presence of cracks in the bent area of the resin film, and the minimum plate number n at which the crack is not generated is determined and used as an indicator of processability and designated as nT" -

As substantially same, polyester resin disclosed by Kajimaru will inherently have same properties, including ability to form film with properties claimed by Applicant's at specified conditions.

Regarding Claim 5 see [0023].

Regarding Claim 6 see [0021].

Regarding Claims 7 and 8 Kajimaru discloses production process of obtaining aqueous dispersion of polyester resin(see [0060] – [0066]), wherein resin mixed with organic solvent and basic compound in water at preferable temperature less than 40°C with following step of removing organic solvent(see [0067]).

Regarding limitation of Claim 9: amount of basic compound(see[0050]) disclosed by Kajimaru as 0.2 to 2 times more than equivalent amount of the carboxyl group satisfies value of F in formula (1).

Regarding Claim 10 – see [0022], [0023], [0024],[0026] and [0027].

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims

are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-2 and 6 - 10 rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. US 6,818,699 and in view of Uno(EP 1 202 122).

Although the conflicting claims are not identical, they are not patentably distinct from each other because(as it shown in paragraph 2 above) Applicant's claimed subject mater is anticipated or obvious modification of claims 1-6 and 10 of U.S. Patent No. US 6,818,699.

Claims 1-6 of U.S. Patent No. 6,818,699 drawn to polyester aqueous dispersion and method of producing this dispersion, using same chemical compounds. The difference is in acid value of polyester resin, particularly in range below 8 mg/KOH. However, Uno teach that substantially same polyester with range of acid value about 5 mg/KOH can improve stability of the polyester resin in dispersion (see [0017]).

Therefore, it would be obvious to modify claim 1 of U.S. Patent No. 6,818,699 and claim range of acid values below 8 mg/KOH and use of specific anhydride as trimellitic anhydride as it was explained in paragraph 1 or 2 above.

Response to Arguments

4. Applicant's arguments filed on October 11, 2007 related to Claims 1-2 and 6-10 rejected under 35 U.S.C. 103(a) as being unpatentable over Uno (EP 1 202 122) in view of Kajimaru (US 2002/0061959 - now US Patent 6,818,699) have been fully considered but they are moot in view of new grounds .

5. Applicant's arguments filed on October 11, 2007 related to Claims 1-2 and 6-10 rejected under 35 U.S.C. 102(b)) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kajimaru(US 2002/0061959 - now US Patent 6,818,699) and ODP rejection have been fully considered but they are not persuasive for the following reasons:

a) Kajimaru 959" does disclose acid value in a range below 8 mg (see lines 10 – 15, column 5) as it was stated above- see paragraph 2. Note, that one of ordinary skill in the art would not have considered the disclosures of the references to be limited to their preferred embodiments or working examples – see Merc, 874 F.2d at 807, 10 USPQ 2d at 1846.

b) Note that according to Applicant's arguments difference in production methods of polyester resin aqueous dispersion in the order of adding (or mixing) of same compounds.

However, "the order of procedure in mixing ingredients" without record, that "indicated that particular order of steps ...results differing in any way from those which would be brought about if another order of steps were followed" was not held inventive as it was stated in *In re Hampel* (74 USPQ 171, June 17, 1947, 162 F.2d 483).

So far Applicant fails to show that claimed order of mixing (see Claims 7 and 8) produced result different from cited reference.

Conclusion

THIS ACTION IS NOT MADE FINAL.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gennadiy Mesh whose telephone number is (571) 272 2901. The examiner can normally be reached on 10 a.m - 6 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272 1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:
10/531,308
Art Unit: 1796

Page 10

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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